

## REMARKS

In the Office Action mailed August 6, 2009 from the United States Patent and Trademark Office, claims 16-20 were withdrawn from consideration as being directed to a constructively non-elected invention pursuant to an election/restriction requirement, claims 1, 2, and 5 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 2,070,142 to Scheu (hereinafter “Scheu”), and claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 585,404 to Porak (hereinafter “Porak”) and U.S. Patent No. 6,080,368 to Jackson (hereinafter “Jackson”).

Claims 3, 4, 6-10, and 12-15 were allowed.

Applicant respectfully provides the following.

### Rejections under 35 U.S.C. § 102:

M.P.E.P. § 2131 sets forth the standard for a rejection of a claim as anticipated under 35 U.S.C. § 102. “To anticipate a claim, the reference must teach every element of the claim.” M.P.E.P. § 2131 states further,

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). . . . “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicant respectfully submits that the reference cited in the Office Action fails to teach every element of the claim set as provided herein for the following reasons.

In the Office Action, claims 1, 2, and 5 were rejected under 35 U.S.C. § 102 as being anticipated by Scheu. As amended herein, claim 1 requires:

a combustion chamber in which to combust solid sulfur, the combustion chamber comprising one or more sidewalls, a base, a lid and a gas outlet; [and] a hopper to hold solid sulphur to be combusted, the hopper comprising one or more sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the combustion chamber . . . .

Claim 1. Accordingly, claim 1 requires that the chamber in which combustion occurs be substantially surrounded by the sulphur hopper. (Support for the claim amendments can be found in the specification as originally filed at pg. 10, ln. 6-pg. 11, ln. 2).

To the contrary, Scheu discloses a “vapor heater,” (identified as 11 in Scheu, Fig. 1 and defined by the “hollow inverted frusto-conical portion 71” in Scheu, Fig. 6; *see also* Scheu, pg. 2, col. 2, ln. 34; Scheu, pg. 3, col. 2, lns. 55-57) an “outer housing” (identified as 12 in Scheu, Fig. 1 and defined by “a plurality of circular sections 73, 74 and 75” in Scheu, Fig. 6; *see also* Scheu, pg. 2, col. 2, ln. 36; Scheu, pg. 3, col. 2, lns. 61-62) and a “heater base portion” (identified as 1 in Scheu, Fig. 1 and 63 in Scheu, Fig. 6; *see also* Scheu, pg. 3, col. 2, ln. 37) adapted to contain liquid fuel. *Id.* In operation,

the liquid fuel in the heater base portion is heated . . . and the fuel is thus caused to produce combustible vapors which rise into the vapor heater and . . . pass from the vapor heater into the annular space between the vapor heater and the outer housing, and are contacted by atmospheric air and combustion is caused to take place.

Scheu, pg. 4, col. 1, lns. 20-31. Accordingly, Scheu teaches that combustion occurs in “the annular space between the vapor heater and the outer housing” as opposed to occurring within the vapor heater. As depicted in Scheu, Fig. 6, the combustion chamber defined by “the annular space between the vapor heater and the outer housing” is located entirely above, or otherwise wholly outside, the “heater base portion 63.” As a result, Scheu fails to teach or disclose a “hopper [that] substantially surrounds the combustion chamber” as required by claim 1. Further, the annular space between the vapor heater and the outer housing of Scheu could not be

substantially surrounded by the heater base portion 63 because the “heater base portion 63 . . . [is] adapted to contain a liquid fuel to a suitable level such as indicated at ‘L’ [in Fig. 6].” Scheu, pg. 3, col. 2, lns. 37-39. If the annular space between the vapor heater and the outer housing of Scheu were substantially surrounded by the heater base portion 63 it would be substantially submerged in liquid fuel instead of filled with combustible vapor. For all of the foregoing reasons, claim 1 is allowable. By virtue of its dependence on claim 1, claim 2 is also allowable.

Claim 5 contains similar limitations to those contained in claim 1. Accordingly, claim 5 is allowable for the same reasons discussed above.

Rejections under 35 U.S.C. § 103(a):

“[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). M.P.E.P. § 2141 sets forth the *Graham* factual enquiries that should be considered when making an obviousness rejection under Section 103: 1) ascertaining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. (Citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).) In addition, M.P.E.P. §§ 2141 and 2142 set forth that “the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.” (Citing *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. 398, 82 USPQ2d 1385 (2007)).

Therefore, for a rejection under Section 103 to stand, it must explicitly set forth 1) factual findings showing that each claim element was known in the art at the time of the invention, and

2) factual findings showing that one of ordinary skill in the art, at the time of the invention, would have found it obvious to modify or combine the teachings to arrive at the claimed invention.

In the Office Action, claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Porak and Jackson. As amended herein, claim 11 requires “a hopper to hold solid sulphur to be combusted, the hopper comprising one or more sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the combustion chamber . . . .” This element is neither taught nor disclosed by Porak or Jackson either alone or in combination. Accordingly, claim 11 has been amended to recite structure patentable over the Porak and Jackson references. (Support for the claim amendments can be found in the specification as originally filed at pg. 10, ln. 6-pg. 11, ln. 2).

### **CONCLUSION**

Applicant submits that the amendments made herein do not add new matter and that the claims are now in condition for allowance. Accordingly, Applicant requests favorable reconsideration. If the Examiner has any questions or concerns regarding this communication, the Examiner is invited to call the undersigned.

Dated: December 7, 2009.

Respectfully submitted,

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4850-0640-4613.1